

CLAIMS

What is claimed is:

1. A gaming system comprising:

a host that receives game controller data and determines quality of service (QOS) on the received game controller data, wherein transmission power management at the game controller is based on the QOS of the received game controller data; and

a game controller that transmits the game controller data to the host, receives host data from the host and determines QOS on the received host data, wherein reception power management at the game controller is based on the QOS of the received host data.
2. The gaming system as recited in claim 1, wherein the host instructs the game controller to decrement transmission power at the game controller if the host determines that QOS on the received game controller data is acceptable.
3. The gaming system as recited in claim 1, wherein the host instructs the game controller to increment transmission power at the game controller if the host determines that QOS on the received game controller data is not acceptable.
4. The gaming system as recited in claim 1, wherein the game controller decrements receiver sensitivity at the game controller if the game controller determines that QOS on the received host data is acceptable.

5. The gaming system as recited in claim 1, wherein the game controller increments receiver sensitivity at the game controller if the game controller determines that QOS on the received host data is not acceptable.

6. The gaming system as recited in claim 1, wherein the host and game controller comprise wireless interfaces to establish a wireless link to transmit and receive the host data and game controller data.

7. The gaming system as recited in claim 6, wherein the wireless interfaces are comprised of radio frequency (RF) wireless technology.

8. The gaming system as recited in claim 1, wherein the QOS is based on error correcting using checksums on received data that includes one or more of the following: text data, data packet header data, and voice data.

9. The gaming system as recited in claim 1, wherein the host comprises:
a processor; and
an interface to receive game controller data, coupled to the processor, wherein the processor determines if the game controller data has been correctly received.

10. The gaming system as recited in claim 1, wherein the game controller comprises:

a processor;

an interface to receive host data, coupled to the processor, wherein the processor determines if the host data has been correctly received.

11. The gaming system as recited in claim 1, wherein the host comprises one of a game console or a personal computer.

12. A game controller that adjusts reception power based on quality of service (QOS) of received data from a host, and adjusts transmission power based on feedback from the host.

13. The game controller as recited in claim 12, wherein the feedback from the host is based on QOS of data transmitted by the game controller and received by the host.

14. A game controller as recited in claim 12, embodied as a general-purpose controller with one or more multi-function actuators.

15. A host in a gaming system that determines QOS of data received from a game controller and provides feedback to the game controller to adjust transmission power at the game controller based on the QOS determination.

16. A method to adjust communication power of a game controller comprising:

receiving data from a host;

determining if data from the host is correctly received ; and

changing receiver sensitivity based on the determining if data from the host is correctly received.

17. The method as recited in claim 16, wherein the receiving is through a wireless link.

18. The method as recited in claim 16, wherein the determining is based on at least one of the following data: text data, header data, error correcting data, and voice data.

19. The method as recited in claim 16, wherein the changing decrements receiver sensitivity if the received data is determined to be not correct.

20. The method of claim 16 further comprising changing transmission power based on feedback from the host.

21. The method of claim 20 wherein the feedback is based on a determination by the host of whether data received from the game controller is correct.

22. One or more computer-readable media comprising computer-executable instructions that, when executed, perform the method as recited in claim 16.

23. A game controller that performs the method as recited in claim 16.

24. A method to adjust communication power of a game controller comprising:

receiving data from the game controller;

determining quality of service (QOS) of the received data from the game controller; and

providing feedback regarding how to adjust transmission power to the game controller based on the QOS determination.

25. The method as recited in claim 24, wherein the receiving is performed through a wireless link between the host and game controller.

26. The method as recited in claim 24, wherein the determining is based on one or more of the following QOS metrics: text data, header data, error correcting data, and voice data.

27. The method as recited in claim 24, wherein the providing feedback instructs the game controller to decrement transmission power if QOS is determined to be

acceptable and instructs the game controller to increment reception power if QOS is determined to be not acceptable.

28. One or more computer-readable media comprising computer-executable instructions that, when executed, perform the method as recited in claim 24.

29. A host that performs the method as recited in claim 24.

30. For use with a gaming system, a storage medium having instructions that, when executed on the gaming system, causes the gaming system to perform acts comprising:

determining QOS of data communicated between a host and one or more game controllers;

adjusting receiver sensitivity in the game controllers based on QOS determination of host data received at each of the game controllers; and

adjusting transmission power in each of the game controllers based on QOS determination of game controller data received by the host from each of the game controllers.

31. A storage medium as recited in claim 30, wherein the determining QOS is based on one or more of the following metrics: data received, error correcting on data received, header data, and voice data.

32. A storage medium as recited in claim 30, wherein the determining QOS of data is performed on data that is communicated through wireless communication links between the host and game controllers.

33. A gaming system comprising:
means for exchanging data between a host and a game controller;
means for determining QOS of host data received by the game controller;
means for determining QOS of game controller data received by the host; and
means for changing communication power levels in a game controller, wherein transmission power is changed based on the QOS determination of the game controller and receiver sensitivity is changed based on the QOS determination of the host data.

34. The gaming system as recited in claim 33 wherein the means for exchanging data is performed through a wireless link.